IN THE CLAIMS

Please amend the claims as follows. This listing of claims will replace all prior listings.

1. (Cancelled)

2. (Currently Amended) The cooling device as recited in claim 7, ~~1,~~ wherein said at least one layer of fluorescent energy absorbing material comprises sapphire.

3. (Currently Amended) The cooling device as recited in claim 7, ~~1,~~ wherein said at least one layer of fluorescent energy absorbing material includes at least one textured surface for diffusing fluorescent light.

4. (Currently Amended) The cooling device as recited in claim 7, ~~1,~~ wherein said at least one layer of fluorescent energy absorbing material comprises a coating for diffusing fluorescent light.

5. (Currently Amended) The cooling device as recited in claim 7, ~~1,~~ wherein said heat producing source comprises a diode pumped laser slab.

6. (Canceled)

7. (Currently Amended) ~~The~~ A cooling device comprising: ~~recited in claim 6,~~
a heat producing source that emits fluorescent energy;

at least one layer of fluorescent energy absorbing material positioned adjacent to said heat producing source and comprising a plurality of stacked layers of fluorescent energy absorbing material with each layer including a plurality of fluid orifices and fluid channels that cooperate with each other to define a fluid flow pathway for said coolant medium through said

stacked layers to form an impingement cooling device, wherein said at least one layer of fluorescent energy absorbing material includes at least one storage channel having a thermal energy storage material disposed therein; and

a coolant medium in fluid contact with said at least one layer of fluorescent energy absorbing material wherein said at least one layer of fluorescent energy absorbing material and said coolant medium cooperate to maintain a temperature level of said heat producing source below a predetermined level.

8. (Original) The cooling device recited in claim 7, wherein said thermal energy storage material comprises at least one of a phase change material and a room temperature vulcanizing elastomer, said room temperature vulcanizing elastomer including a filler, and wherein said filler includes at least one of beryllium oxide and aluminum oxide.

9. (Original) The cooling device recited in claim 7, wherein said at least one storage channel comprises at least a first and second storage channels with each of said first and second storage channels having a thermal energy storage material disposed therein, wherein said first and second storage channels are non-colinear.

10. (Original) The cooling device recited in claim 9, wherein said first and second storage channels are formed in different layers of said plurality of stacked layers and are offset from each other relative to said heat producing source.

11. (Original) The cooling device recited in claim 9, wherein said first and second storage channels are formed in the same layer of said plurality of stacked layers.

12. (Cancelled)

13. (Currently Amended) The method for cooling a heat producing source as recited in claim 18, ~~12,~~ wherein the fluorescent energy absorbing material comprises sapphire.

14. (Currently Amended) The method for cooling a heat producing source as recited in claim 18, ~~12,~~ including the steps of forming at least one textured surface on the at least one layer of fluorescent energy absorbing material, and diffusing fluorescent light with the at least one textured surface.

15. (Currently Amended) The method for cooling a heat producing source as recited in claim 18, ~~12,~~ including the steps of depositing a coating on the at least one layer of fluorescent energy absorbing material, and diffusing fluorescent light with the coating.

16. (Currently Amended) The method for cooling a heat producing source as recited in claim 18, ~~12,~~ wherein the heat producing source comprises a diode pumped laser slab.

17. (Canceled)

18. (Currently Amended) ~~The~~ A method for cooling a heat producing source comprising the steps of: ~~as recited in claim 17, including the steps of~~

(a) positioning at least one layer of fluorescent energy absorbing material adjacent to a heat producing source, forming an impingement cooling device by positioning a plurality of stacked layers of fluorescent energy absorbing material adjacent to the heat producing source, and forming a plurality of fluid orifices and fluid channels in each layer that cooperate to define a fluid pathway for a coolant medium;

(b) absorbing emitted fluorescent energy from the heat producing source with the at least one layer of fluorescent energy absorbing material;

(c) cooling the fluorescent energy absorbing material with the coolant medium; and

(d) forming at least one storage channel in the at least one layer of fluorescent energy absorbing material and depositing a thermal energy storage material within the storage channel.

19. (Original) The method for cooling a heat producing source as recited in claim 18, wherein the thermal energy storage material comprises a room temperature vulcanizing elastomer including a filler that includes at least one of beryllium oxide and aluminum oxide.

20. (Original) The method for cooling a heat producing source as recited in claim 18, including the steps of forming non-colinear first and second storage channels in the plurality of stacked layers and depositing a thermal energy storage material within the first and second storage channels.

21. (Original) The cooling device recited in claim 20, including the step of forming the first and second storage channels in the same layer.

22. (Original) The cooling device recited in claim 20, including the steps of forming the first and second storage channels in different layers and offsetting the first and second storage channels relative to the heat producing source.

23.-26. (Cancelled)